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Dark Matter Mono-Z Production at the LHC beyond Leading Order in the Simplified Models

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We present theoretical predictions for the mono-Z production
in the search for dark matter at the LHC with next-to-leading order QCD corrections
and parton-shower effects.
The calculation is performed in the framework of {\tt MadGraph5_aMC@NLO}.
We find that the high order QCD corrections are sizable, and can reduce the theoretical uncertainties.
We also investigate the discovery potential of this signal at the 13 TeV LHC.

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